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EXAMINER

CAO, CHUN

ART UNIT PAPER NUMBER

2115

DATE MAILED: 01/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/074,965

Applicant(s)

ODAOHHARA ET AL.

Examiner

Chun Cao

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 May 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-16 are presented for examination.
2. The drawings were received on 5/15/02. These drawings are accepted.
3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The current title is imprecise.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitations "the voltage" in line 5. There is insufficient antecedent basis for this limitation in the claim.

Claims 2-4 are rejected because they incorporate the deficiencies of claim 1.

Claim 5 recites the limitations "the main body "and " the apparatus" in lines 1-2; "the primary power source" and " the first operating frequency" and "the second operating frequency" in lines 3, 7-9. There are insufficient antecedent basis for this limitation in the claim.

Claims 6-7 are rejected because they incorporate the deficiencies of claim 5.

Claim 8 recites the limitations "the voltage" and "the main body " and " the apparatus" in lines 1-3. There are insufficient antecedent basis for this limitation in the claim.

Claim 9 recites the limitations " the main body" and "the voltage" and "the operating frequency" in lines 3, 7, 9. There are insufficient antecedent basis for this limitation in the claim.

Claim 10 is rejected because they incorporate the deficiencies of claim 9.

Claim 11 recites the limitations "the state" and "the direct current power" and "the output" and "the state of said switching circuit" and "the operation of said operating section" and "the opening of said power line" in lines 6-12. There are insufficient antecedent basis for this limitation in the claim.

Claim 13 recites the limitations " the plug" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claims 12-13 are rejected because they incorporate the deficiencies of claim 11.

Claim 14 recites the limitations "the main body" and "the voltage" in line 2. There are insufficient antecedent basis for this limitation in the claim.

Claim 15 recites the limitations "the state of connection of the line between said power supply device" in lines 2-3. There are insufficient antecedent basis for this limitation in the claim.

Claims 15-16 are rejected because they incorporate the deficiencies of claim 14.

Claim Rejections - 35 USC § 103

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6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kono et al. (Kono), JP patent no. 2000-308257 in view of Hirst (Hirst), U.S. patent no. 6,294,904.

As per claim 1, Kono discloses an AC adaptor connectable to a main body of an apparatus through a power line [fig. 1], comprising:

a rectifying and smoothing unit for rectifying and smoothing an inputted alternating current voltage [English translation paragraphs 0010, 0016];

a switching unit for switching a voltage rectified and smoothed by said rectifying and smoothing unit [English translation paragraphs 0013, 0014]; and

an operating frequency supplying unit for supplying an operating frequency of switching performed by said switching unit, wherein said operating frequency supplying unit supplies a first operating frequency to said switching unit when said main body of the apparatus operates normally and suspends supply of a power source completely in a standby state [English translation paragraphs 0016, 0018, 0020].

Kono does not explicitly disclose of supplying a second operating frequency, which is lower than said first operating frequency, to said switching unit when the power line to said main body of the apparatus is separated, or when said main body of the apparatus is in a prescribed standby state.

However, Hirst discloses of supplying a second operating frequency, which is lower than said first operating frequency, to said switching unit when the power line to said main body of the apparatus is separated, or when said main body of the apparatus is in a prescribed standby state [col. 2, lines 59-65; col. 4, lines 42-52].

It would have been obvious to one of ordinary skill in the art at time the invention to combine the teachings of Kono and Hirst because they are both directed to a power supply system, and the specify teachings of Hirst stated above would provide an reliable means of maintaining minimum power supply from a power source in a standby state.

As per claim 2, Kono discloses that a plug for connecting said power line to said main body of the apparatus, wherein said plug comprises an operating section that operates to switch the operating frequency when connected to said main body of the apparatus [figs. 1, 2; English translation paragraphs 0003, 0016].

As per claim 3, Hirst discloses that a power line comprises a voltage line for a secondary output voltage outputted on the basis of switching by said switching unit and a DC return line, as well as a control line for switching the operating frequency supplied by said operating frequency supplying unit [fig. 2; col. 5, lines 32-54].

As per claim 4, Hirst discloses that the operating frequency supplied by said operating frequency supplying unit is switched by short-circuiting or opening said control line against said DC return line [fig. 2; col. 5, lines 32-54; col. 6, lines 30-43].

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

9. Claims 5-10 and 14-16 are rejected under 35 U.S.C. 102(a) as being anticipated by Hirst (Hirst), U.S. patent no. 6,294,904.

As per claim 5, Hirst discloses that a power supply device for supplying electric power to a main body of an apparatus by performing a prescribed switching operation [fig. 2], comprising:

a switching unit for performing a switching operation for a primary power source and a control unit for controlling the switching operation performed by said switching unit [col. 5, lines 46-52]; , wherein said control unit controls said switching unit on the basis of a first operating frequency, and controls said switching unit on the basis of a second operating frequency, which is lower than said first operating frequency when

said main body is in a low power consumption mode [col. 4, lines 42-49; col. 5, lines 32-45].

As per claim 6, Hirst discloses that an output voltage line required for supplying electric power to said main body of the apparatus and a DC return line, as well as a control line a state of which is changed by whether said main body is in a low power consumption mode or not, wherein said control line switches between said first operating frequency and said second operating frequency on the basis of the state of said control line [fig. 2; col. 5, lines 32-54; col. 6, lines 30-43].

As per claim 7, Hirst discloses that the state of said control line is changed by the operation from said main body [col. 5, lines 46-52; col. 6, lines 29-42].

As per claim 8, Hirst discloses that a power supply device of a switching regulator system for switching a voltage obtained by rectifying and smoothing an alternating current voltage, and supplying a DC voltage to a main body of an apparatus [fig. 6; col. 8, lines 12-16] comprising:

a switching unit for performing a switching operation on the basis of a prescribed operating frequency; and a control unit for controlling said switching unit so as to perform a switching operation at a low operating frequency when said main body of the apparatus is in a prescribed waiting mode [col. 4, lines 42-49; col. 5, lines 32-52; col. 8, lines 27-49].

As per claim 9, Hirst discloses that a Voltage Supply apparatus [fig. 6] comprising:

electrical equipment connected to an alternating current power source [figs. 1, 6; col. 4, lines 27-30], a DC voltage supply device for supplying a DC voltage to a main body wherein said DC voltage supply device [fig. 6, col. 8, lines 9-16] comprises: a rectifying and smoothing unit for rectifying and smoothing an inputted alternating current voltage [col. 6, lines 22-23]; a switching unit for performing switching a voltage rectified and smoothed by said rectifying and smoothing unit [col. 5, lines 24-31]; and operating frequency supplying unit for supplying an operating frequency of switching performed by said switching unit and an operating frequency of a low frequency for a standby state mode; and said main body shifts said operating frequency supplying unit to said waiting mode when said main body is in a prescribed standby state [fig. 2; col. 5, lines 32-54; col. 6, lines 30-43].

As per claim 10, Hirst inherently discloses that the prescribed standby state include a soft-off or suspend state of said main body of the apparatus [col. 2, line 67-col. 3, line 16].

As to claims 14-16, Hirst teaches the claimed system. Therefore, Hirst teaches the claimed method of steps to carry out the system.

10. Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirst (Hirst), U.S. patent no. 6,294,904 in view of what was well known in the art, as exemplified by Nagai et al. (Nagai), U.S. patent no. 6,373,724.

As per claim 11, Hirst discloses that an electrical device [fig. 1] comprising:

an AC adaptor connected to an alternating current power source and for supplying a DC voltage; a main apparatus connected to said AC adaptor through a power line, and activated by an output voltage from said AC adaptor [fig. 1; col. 4, lines 27-31]; and an operating section that operates depending on a state of connection between said AC adaptor and said main apparatus through said power line [col. 5, lines 14-52],

wherein said AC adaptor activates a switching circuit by a direct current power converted from an alternating current power, converts an output from said switching circuit and supplies the DC voltage to said main apparatus, and shifts a state of said switching circuit to a low power mode on the basis of an operation of said operating section performed in standby state [col. 5, lines 14-52].

Hirst does explicitly teach of shifting a state of said switching circuit to a low power mode on the basis of an operation of said operating section performed corresponding to an opening of said power line. In other words, Hirst does not teach that a standby state is considered as a condition of disconnecting the power line of the AC adaptor to an electronic apparatus.

Examiner takes Official Notice that a standby state is considered as a condition of disconnecting the power line of the AC adaptor to an electronic apparatus which is well known in the art of computer system, evidence of which may be found in:

Nagai: col. 1, lines 12-28

It would have been obvious to one of ordinary skill in the art at time the invention to employ the use the condition of disconnecting the power line as a standby state and

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thereby determining a presence of an electronic apparatus whether is connected to the AC adaptor as Nagai teach in the above-cited passage.

As per claim 12, Hirst discloses that AC adaptor in said low power mode activates said switching circuit with an operating frequency lower than a normal operating frequency [col. 4, lines 42-49].

As per claim 13, Hirst discloses that operating section is provided in a plug for connecting said AC adaptor to said main apparatus through said power line [fig. 1, col. 4, lines 27-32]. Nagai teaches of implementing the operation performed corresponding to the opening of said power line when said plug is disconnected from said main apparatus [col. 1, lines 12-28].

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chun Cao whose telephone number is 571-272-3664. The examiner can normally be reached on Monday-Friday from 7:30 am-4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas C. Lee can be reached on 571-272-3667. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is 571-272-2100.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Chun Cao

Dec. 27, 2004